

C.U. SHAH UNIVERSITY

Summer Examination-2020

Subject Name: Power System Protection**Subject Code:** 4TE07PSP1**Branch:** B.Tech (Electrical)**Semester :** 7**Date :** 03/03/2020**Time :** 10:30 To 01:30**Marks :** 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1**Attempt the following questions:****(14)**

- 1) Define the term: Time Setting multiplier
- 2) Define the term: Plug setting multiplier
- 3) Give only the types of relay test.
- 4) Give the types of test performed on current transformer (CT).
- 5) Draw inverse, very inverse and extremely inverse characteristics for overcurrent relay.
- 6) The electromagnetic relay operation occurs when operating torque becomes greater than restraining torque. Determine whether the given statement is TRUE or FALSE.
- 7) Which type of relay is used for overload protection in an induction motor?
- 8) The relay used for the feeder protection is:
 - (a) Under-voltage relay
 - (b) Translay relay
 - (c) Thermal relay
 - (d) Buchholz relay
- 9) _____ relay is a gas operated relay.
- 10) In _____ (unit/nonunit) protection, relay operates only for internal faults
- 11) Which component ensures the safety of the line from damage?
 - (a) Relay
 - (b) Circuit breaker
 - (c) Bus bar
 - (d) Current transformer
- 12) If a relay operates for a fault beyond its protected distance, relay is said to be _____ (overreach/underreach).
- 13) In a breaker back up protection, different breakers are provided for main and back up protection. Determine whether the given statement is TRUE or FALSE.
- 14) Give the name of different types of unsymmetrical faults.

Attempt any four questions from Q-2 to Q-8**Q-2****Attempt all questions****(14)**

- a) Discuss the essential qualities of a protection system. **07**
- b) Draw the basic connection of Trip circuit and explain how it works. **07**



